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ABSTRACT

This paper presents a comprehensive case analysis of formal environmental scanning processes in three different institutions of higher education. The study focuses on how environmental scanning activities are organized and used to support institutional planning and decision-making. Special emphasis is placed on describing how environmental circumstances influenced the development of the environmental scanning process and analyzing how environmental scanning information is utilized within various institutional sectors. The research questions addressed at the case study sites are: (1) What events and circumstances led to the development of the environmental scanning process at the case site? (2) How is the environmental scanning process currently structured and organized within the case site? (3) How are the environmental domains defined and scanned by the organization? (4) How is environmental scanning information incorporated into the planning and decision making activities of the case site? (5) What is the perceived effectiveness of environmental scanning upon the planning and decision-making efforts at the case site? Results indicated that support from the chief executive officer was a necessary but not sufficient step in establishing a credible environmental scanning process; that decision makers were looking for ways to reduce environmental uncertainty; and that scanning information was used for several functions including strategy formulation, problem identification, decision selling, and goal and objectives setting. Contains 39 references. (GLR)

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Environmental Scanning in Support of Planning and Decision Making: Case Studies at Selected Institutions of Higher Education

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Florida Postsecondary Education Planning Commission

Paper presented at the 1990 annual meeting of the Association for Institutional Research, May 13-16, 1990, Louisville, Kentucky.

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This paper was presented at the Thirtieth Annual Forum of the Association for Institutional Research held at The Galt House, Louisville, Kentucky, May 13-16, 1990. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

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ABSTRACT

This paper presents a comprehensive case analysis of formal environmental scanning processes in three different institutions of higher education. The study focuses on how environmental scanning activities are organized and used to support institutional planning and decision-making. Special emphasis is placed on describing how environmental circumstances influenced the development of the environmental scanning process and analyzing how environmental scanning information is utilized within various institutional sectors. The paper may be of particular interest to institutional research officers who are involved in supporting institutional strategic planning efforts.

INTRODUCTION

Colleges and universities have been described as organizations operating in the context of open systems (Owens, 1987; Cope, 1987). Open systems theory assumes that an organization is in continuous interaction with its external environment (Morgan, 1986). The external environment is defined as "those events, circumstances, and factors which occur outside the boundaries of the organization and which may influence what happens within it" (Bryans, 1983, p. 110). Scholars in the field of organizational theory have divided the organization's external environment into two layers: the task environment and the general environment (Daft, 1988; Dill, 1958; Hall, 1977). The task environment is that layer which is closest to the organization and directly influences the daily operations of the organization. Morrison and Mecca (1989) identified some factors in task environment of colleges and universities such as clients/students, revenue sources, and government policies and regulations. The outer environmental layer is called the general environment and consists of factors that affect all organizations indirectly. The general environment includes factors in the social, demographic, technological, political, and economic sectors of society.

Institutions of higher education are affected by factors presented in the task and general environmental sectors. Jonsen (1986) describes colleges and universities as swimming in an "environmental sea of external circumstances" (p. 6). Keller (1983) asserts that the environment surrounding higher education "has turned from solicitous and supportive to censorious and cold-blooded" (p. 69). He further writes that:

> Regulations are being imposed, appropriations are being slashed. Consumers by the hundreds of thousands now question whether their costly investment in college will really prove worthwhile. Colleges and universities are being shaken from their self-regarding world of internally generated wish-lists and abundance. They have entered a new world of consumer markets and scarcity (p. 69).

Changing demographics, dwindling resources, increased competition, demands for quality, rapid change, and a steady-state economy have influenced college and university decision makers to reevaluate traditional planning methods (Chaffee, 1984; Cope, 1985, 1987; Keller, 1983; Kotler & Murphy, 1981). Keller (1983) has written that the ability of administrators to lead their institutions in the face of an ever-changing environment is higher education's most significant problem. An increasing number of college and university administrators are using a planning orientation that

emphasizes achieving organizational effectiveness through adapting to the complex, changing world of external forces (Cameron, 1984; Chaffee, 1985; Cope, 1987; Keller, 1983; Peterson, 1986).

Higher education decision makers are beginning to link institutional decision-making with an eye to the environment through a business management practice known as strategic planning (Cope, 1987; Jonsen, 1986; Keller, 1983; Morrison, 1984; Norris & Poulton, 1987; Peterson, 1986). A survey conducted by Peat, Marwick, Main and Company in the late 1980s found that "80 percent of the 713 colleges and universities polled said they use some form of strategic planning" (McMillen, 1988, p. A16). Deegan (1988) found in a 1987 national survey of over 100 community college presidents that 73 percent were "currently using" strategic planning on an institution-wide basis and an additional 14 percent of the presidents were planning to try it by 1990.

Strategic planning is an "open systems" approach to decision-making whose "key focus is on assessing the turbulent environment surrounding a college or university" (Baldridge & Okimi, 1982, p. 17). Strategic planning usually consists of four broad elements (Peterson, 1980, p. 141):

1. Environmental assessment or scanning (to identify trends or potential changes in the environment and their implications for the institution);
2. Institutional assessment (to clarify strengths, weaknesses, problems, and capabilities of the institution);
3. Values assessment (to consider values, aspirations and ideals of various constituencies and responsibilities of the institution to them and the larger public);
4. Strategic or master plan creation (to devise a strategic pattern, design, or direction for the institution on the basis of the first three elements).

The fields of corporate planning and futures research have also introduced <u>environmental scanning</u> to higher education as an important element of strategic planning. Hambrick (1982) writes that environmental scanning is an important conceptual step in understanding the way organizations adapt to their changing external conditions. Aguilar (1967) defines the environmental scanning process as the systematic search and acquisition of external information in order to lessen the randomness of information flowing into the organization, thereby enabling managers to detect in advance changing environmental conditions. Morrison (1986) further elaborates that an environmental scanning system:

> ...allows the institution to detect social, technological, economic, and political trends and potential events which define the context of the future. In turn, decision makers can anticipate what is happening in the state, region, nation,

> and world that will affect the nature and quality of the institution and its educational programs (pp. 3-4).

Peterson (1980) writes that the purpose of environmental scanning is not to make plans or set goals. Rather, environmental scanning "allows one to question the underlying resource segment and environmental sector assumptions implicit in an institution's current direction or plan; it can suggest opportunities for and constraints to planning; and it might identify likely impacts of alternative future courses of action" (Peterson 1980, p. 145). The nature of environmental information is wide-ranging, uncertain, qualitative, and value-laden (Norris & Poulton, 1987). Cope (1987) also suggests that external information needed for strategic choices is wide-ranging, qualitative, and often has a low level of accuracy.

Environmental scanning is a planning innovation whose use is increasing in colleges and universities (Morrison, 1986). Incorporating environmental scanning with strategic planning can "contribute to crucial decision points in an institution's life" (Sadler, 1987, p. 18). In spite of published attempts by colleges and universities to plan strategically, institutions of higher education have failed to develop the structures and processes which link the organizations to their external environment (Jonsen, 1986). George Keller states:

> Colleges still have weak mechanisms for monitoring their environments....We still haven't found a way to track external environments the way we employ institutional research for monitoring the inside [of colleges and universities]. We haven't committed the money or talent to the task of doing first-rate assessments of our society and of the new imperatives for higher learning so that universities can adjust more promptly and reach out to new opportunities (Marchese, 1988, p. 5).

According to Jonsen (1986), institutions of higher education need the following:

1. A mechanism to integrate understanding about various aspects of the environment, especially as they might be interrelated;
2. The capacity to translate this integrated understanding into the institution's long-range planning and decision-making;
3. Sufficiently high-level priority given to this activity to ensure its translation into decisions and then implementation (p. 16).

Several unanswered questions remain regarding the state of environmental scanning techniques in institutions of higher education. Glover and Holmes (1983) point to a gap in the literature explaining how environmental assessment is designed and implemented in colleges and universities. In a recent nation-wide study of campus planning practices, Schmidtlein and Milton

(1988) found a serious lack of good data on external trends and internal operations. Moreover, they determined that for the near future there was only "minimal capability" to develop such data. Morrison (1987) writes that "substantial questions remain" regarding how environmental scanning is effectively integrated with ongoing organizational planning and decision-making activities in higher education settings.

Most of the literature describing the state of planning in higher education is presented in a prescriptive framework (Chaffee, 1985; Norris and Poulton, 1987). Research on environmental scanning is especially deficient in empirical investigations. Norris and Poulton (1987) cite that research on environmental scanning is an area of emerging importance in higher education planning, strategy, and policy formulation. Specifically, Norris and Poulton (1987) write that the literature on planning in higher education "lacks detailed case studies of successful applications on environmental scanning" and that "studies should appear in the next several years" (p. 171).

Sadler (1987) concurs with Norris and Poulton's assessment for more research on successful, ongoing environmental scanning efforts. Sadler (1987) adds that future environmental scanning research should "address the leadership and organizational implications of structuring this new approach to higher education decision-making" (p. 18). Research needs to be conducted to determine: (1) how formal environmental scanning processes are structured and organized in higher education settings; and, (2) how environmental scanning information is merged with planning and decision-making activities.

The purposes in conducting these case studies were: (1) to describe how exemplary environmental scanning processes were structured and organized in three selected higher education settings; and, (2) to describe how environmental scanning information is incorporated into planning and decision-making activities of these organizations. The research questions addressed at the case study sites are as follows:

1. What events and circumstances led to the development of the environmental scanning process at the case site?

2. How is the environmental scanning process currently structured and organized within the case site?

3. How are the environmental domains defined and scanned by the organization?

4. How is environmental scanning information incorporated into the planning and decision making activities of the case site?

5. What is the perceived effectiveness of environmental scanning upon the planning and decision-making efforts at the case site?

The study of exemplary environmental scanning processes via the case study method contributes to the practice and theory of planning in higher education. First, case studies provide an historical framework on how a planning innovation such as environmental scanning is introduced to three different types of higher educational organizations. Second, case studies on exemplary environmental scanning processes extend existing knowledge on how scanning activities are designed, structured, and managed. Finally, the case studies provide scholarly information on the feasibility of incorporating environmental intelligence into the planning and decision-making activities of higher educational organizations.

METHODOLOGY

Formal environmental scanning activities have been recently introduced to institutions of higher education. The researcher determined that a contextual study of exemplary cases would provide more incisive information than a study describing an "average" case. As a result, the case study method was employed by the researcher. The case study is an empirical form of inquiry that investigates a contemporary phenomenon within its original context and employs multiple sources of evidence in the collection of data (Yin, 1984). In-depth information was sought related to the formal environmental scanning and planning activities of a public community college, a public master degree granting university, and a public doctorate degree granting university.

PROCEDURES

The procedures for carrying out the study followed three basic steps. Step One involved the selection of field sites for the investigation. Field sites selected for this investigation were chosen according to a concept known as purposeful sampling. Purposeful sampling is appropriate "when one wants to learn something and come to understand something about certain select cases without needing to generalize to all cases" (Patton, 1980, p. 100). Nine higher education planning experts with a predetermined number of peer-reviewed publications were asked to submit nominations of institutions that have formal, exemplary environmental scanning processes. A total of fifteen institutions were nominated as field sites: five public community colleges, four public universities

granting masters degrees, and six public universities granting doctoral degrees. Three final field sites were selected according to the following criteria: the institution's willingness to participate in the study; the institution's planning process utilizes environmental scanning information; the institution's formal environmental scanning process has elements of sophistication (continuous vs. ad hoc, scans a broad range of environments, balance of quantitative and qualitative data); the field sites included a community college, a masters granting university, and a doctorate granting university; and the investigator must have access to data sources (interviews, documents, meeting notes, etc.).

Step Two involved permission to visit the field sites, to interview selected individuals, and to collect relevant documents. Permission was obtained to visit the field sites during May and June 1989. A campus liaison was identified for each institution by the expert who nominated the field site. The campus liaison was asked to assist the researcher in identifying individuals to be interviewed, scheduling interviews, and collecting relevant documents. Individuals selected for interviews were chosen because of their intimate knowledge or involvement with the organization's environmental scanning or planning processes. Position titles and roles of those interviewed included chief executive officers; senior academic, planning, development, public affairs, and student affairs officers; academic unit heads; institutional research directors; library directors; continuing education directors; and faculty. Documents collected at the field sites included institutional fact books, catalogues, institutional planning materials, environmental scanning materials, accreditation self-studies, and presidential speeches.

Step Three involved the data collection process. Interviews were conducted by the researcher over a three to four day period at each field site. The number of scheduled interviews was nine at the community college, twelve at the masters granting university, and eleven at the doctorate granting university. A total of 31 interviews were completed out of 32 individuals identified to be interviewed (97 percent).

An interview protocol was established by the researcher to develop a rapport with the respondents and to clarify their role in the study. Elite interviews were conducted using semi-structured and open-ended questions. Those interviewed were extremely cooperative and eager to expound upon their answers. Respondents also expressed great appreciation that the researcher

was utilizing interviews in place of a mail survey to conduct the research. Respondents felt as if they were better understood and also learned something different about their institution's planning process by sharing information in a give-and-take session.

DATA ANALYSIS

Qualitative data were collected for this study. Qualitative data consist of detailed descriptions and direct quotations obtained from interviews, documents, and observations at the field site. The primary advantage of qualitative data are the detail and depth in which phenomena are described.

The overall goal of case study data analysis was to treat the data fairly and to produce compelling analytic conclusions. The data analysis for this study was structured around the research questions. The strategy for analyzing data depended upon the "investigator's own style of rigorous thinking, along with the sufficient presentation of evidence and careful consideration of alternative interpretations" (Yin, 1984, p.99). The researcher inductively searched for common themes that emerged from the transcribed responses and the institution's documents. Common themes which emerged from the data sources were coded and categorized according to the appropriate research questions. Decision rules for coding responses were documented by the investigator.

RESULTS

The following case reports are based upon the investigator's preliminary analysis of the data and a follow-up discussion with contacts at each case site.

UNIVERSITY A

University A is a public, urban university located in the largest metropolitan area of the state. The University is governed by a Board of Trustees and is one of two doctorate granting, research universities in the state system. The 1988-89 enrollment was approximately 22,000 students and the University's operating budget was $232 million. The mission of University A was built upon its history and tradition as an urban university. The University offers a broad range of programs at the undergraduate and masters level. The four largest schools by enrollment are Arts and Sciences, Engineering, Education, and Business, respectively. Doctoral programs are offered in the health sciences and in selected other fields which are closely related to University A's urban character. In

addition, the University maintains a statewide responsibility for providing professional programs in medicine, dentistry, and law.

In 1983, University A laid the groundwork for a comprehensive, strategic planning process. Three major factors influenced the development of strategic planning and the external environmental analysis process at University A: the influence of the Board of Trustees, the leadership of the University's President, and the perceived disenchantment with the University's previous planning efforts. First, the University's Board of Trustees played a significant role in the introduction of strategic planning and environmental analysis at the field site. The Board of Trustees was composed primarily of individuals who were corporate officers or executives from the private sector. Several of these Trustees had successfully employed strategic planning in their respective organizations. As a result, several Board members "went out looking for a president that would be committed to planning." A new president was selected and urged by the Board of Trustees to begin a strategic planning process. The President was told by Board members that they wanted him to be a pioneer in higher education strategic planning and that they would back him in his endeavor to make the institution one of the best urban universities in the country.

Second, the President's role was frequently cited by respondents as the most important determinant in the development of strategic planning and environmental analysis at University A. The Board of Trustees authorized the President to provide strong executive leadership in carrying out the strategic planning process. The President's objective was to "lay out a road map" by outlining his leadership goals through the strategic plan. The President determined that University A needed to develop strategies for coping with change and for filling a distinctive place within the state's system of higher education. A consultant was employed to assist in the development the strategic planning procedures. However, the President was personally involved in nearly every step of the planning process. He retained complete responsibility for planning and budgeting decisions through University A's existing governance procedures.

A third influence in the development of strategic planning and environmental analysis at the case site was the perceived ineffectiveness of previous planning approaches. The interviews and documents provided rich descriptions of failures in previous planning efforts. The President described the previous planning process as a "circular, abstract, endless process that had little or no

relevance to decision making." One academic administrator provided this interesting description of the previous planning process:

> We did something called long-range planning....But it was more of a wish-list, everybody indicated what it was they hoped to do and not really examining what could be done. So those efforts usually got put upon the shelf. The planning effort under a former president required fairly long, detailed plans from each academic unit and all the support units. They were like inquisitions where you had to defend them in front of a group and nothing happened....The most critical difference between strategic planning and the previous planning is now you have to base your wish-list on reality...the environmental analysis.

The environmental scanning process (referred to as the external environmental analysis) is one of three elements of the University A's strategic planning process. The President stated that unlike traditional planning, the strategic plan of University A provides direction based on the environment in which University A operates. Therefore, a critical component of the institution's strategic planning process is the environmental analysis. The environmental analysis for University A is updated every two years. The President appoints an ad hoc committee composed of no more than eleven faculty and staff who are nominated by the faculty senate, deans, vice presidents, and others. The environmental analysis committee also has representatives from the local business community to assist in the analysis.

Three characteristics were commonly cited as important traits for environmental analysis committee members to possess. First, expertise in some specific area of the environmental analysis was seen as important. For example, one interviewee said that in certain key areas such as economics, politics, and technology, the President tried to select the "most expert in the field to be on the committee." Therefore, it was standard practice to see a faculty member from the school of business analyze economic/financial forces while someone from political science studying political/legal environmental forces. Second, some respondents emphasized that getting a perspective from the local community was vital to the environmental analysis. Replied one academic administrator:

> The fact that the group that did the environmental analysis included people from the community, they had a much better finger on the pulse of the community than we would have from within the University. We are a bit insulated.

Finally, several of the respondents considered the most important characteristic to have as a member of the environmental analysis committee was a university-wide view rather than a discipline

or "turf-oriented perspective". This sentiment was expressed in the President's charge to the environmental analysis committee:

> The faculty members and community members appointed to the committee will be expected to have analytical expertise but, more importantly, must have the breadth of mind and approach necessary to an overall perspective of the University.

Since 1983, there have been three formal environmental analyses completed for University A's strategic plan. The first environmental analysis, completed in the fall of 1983, provided an operational framework and data analysis for the 1986 and 1988 environmental analysis updates. The role of the environmental analysis committee members was to provide University A's strategic decision makers with important perspectives of trends that existed in the University's external environment.

The Environmental Analysis Committee focused primarily on the University's task environment rather than the general societal environment. Emphasis was placed on monitoring trends in the local community and state. Individuals on the committee were responsible for data collection and data analysis in eight specific environments: (1) Supplies/Suppliers, (2) Economics/Financial, (3) Technological, (4) Demographics/Social Trends, (5) Research Funding, (6) Political/Legal, (7) Higher Education, and (8) Business Perceptions/Observations. Each specific area of responsibility was subsequently broken down into smaller components by the person doing the research and analysis. For example, the technological environment was subdivided into forces such as personal computers, expert software systems, computer applications, satellite television, automated office, automated library, and research cooperatives.

Committee members developed an expertise in analyzing a mixture of qualitative and quantitative data. Data were from primary sources (original reports or studies) as well as secondary sources (newspaper reports, magazine articles, popular books). Information collected from primary sources included surveys conducted by university departments, statistics obtained from state and federal agencies, and personal interviews conducted by committee members. Examples of primary sources used were state population forecasts, state Department of Revenue projections, U.S. Department of Commerce business projections, U.S. census data, and National Institutes of Health reports. Secondary sources consisted of local and national newspaper articles, popular books and periodicals, and professional journals. Examples of secondary data sources and publications used

were The Chronicle of Higher Education, U.S. News and World Report, Megatrends, In Search of Excellence, and American Economics.

The 1983 environmental analysis resulted in a 156 page document. Subsequent analyses were conducted in 1986 and 1988. The final products of the 1986 and 1988 environmental scans were updated, abbreviated versions of the 1983 analysis. For example, the 1988 update was only 23 pages long. Committee members provided a detailed description of each environmental sector they were responsible for analyzing. In addition to each committee member's analysis, the committee as a whole rated to what extent each environmental force was perceived as a threat or opportunity to six strategic decision areas of the University. The rating scaled used by the environmental analysis committee ranged from a -3 as an "extreme threat" to a +3 as an "exceptional opportunity." A rating of 0 indicated neutral impact. The following narrative provides an example of how environmental data were presented and rated in the 1983 External Environmental Analysis report:

Expansion in the Singles Market

> A national trend is in evidence for the nontraditional household. In 1980, 22.0 percent of all households were single adults. It is also estimated that household size will decline from 2.8 in 1980 to 1.8 by the year 2000. In 1980, our county had 58,921 single households, or 23.5 percent of all households. These figures compare favorably with the national trend. The emergence of the singles market is a sign of individualism. It may also point to the need for education or additional education in the pursuit of individualism. [This environmental analysis represented to the University a marginal opportunity of +1.]

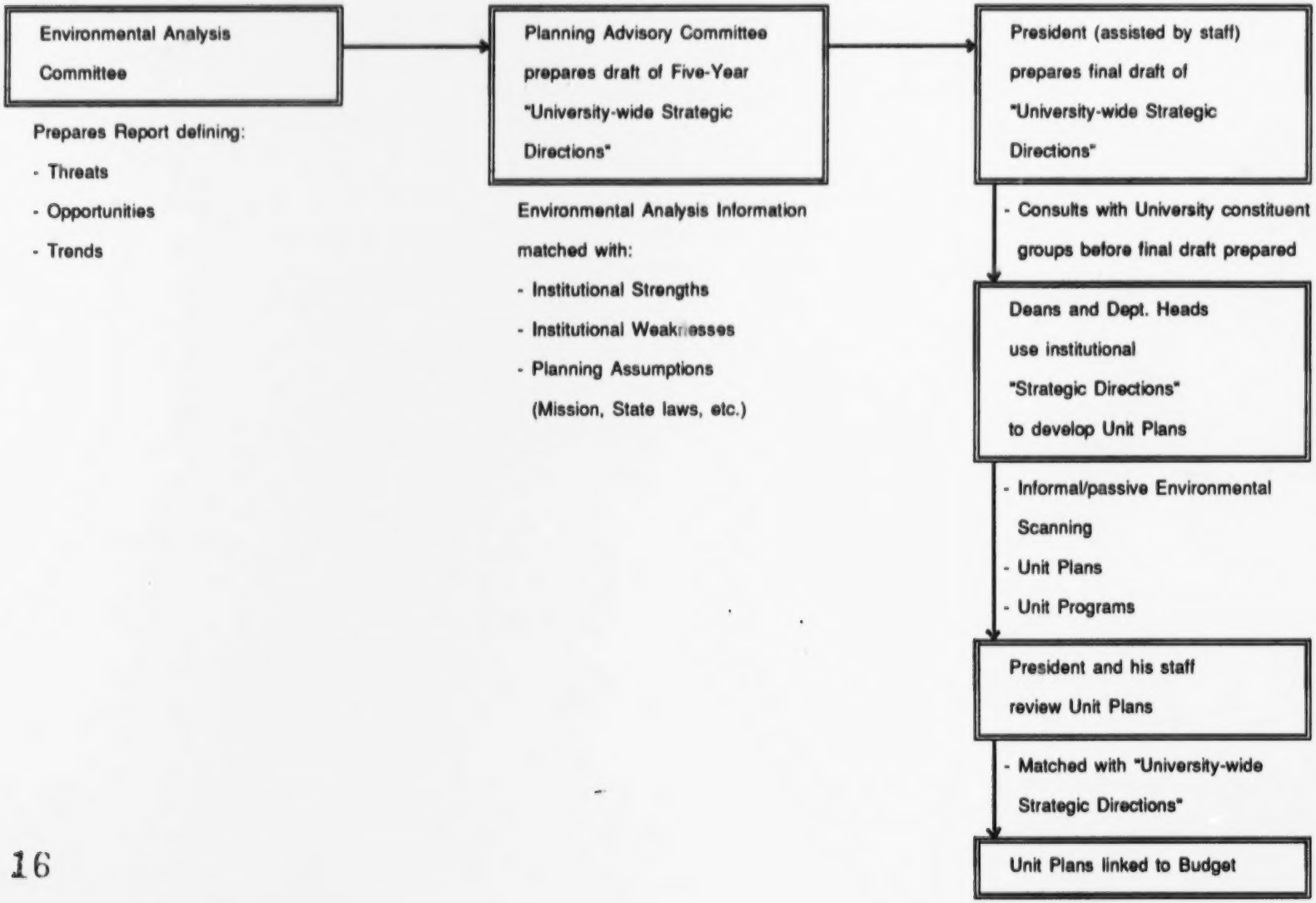
Information from the environmental analysis is integrated into decision making by an ad hoc Planning Advisory Committee (PAC) (see Figure 1). The results of the environmental analysis (opportunities and threats) are matched with institutional values, institutional strengths and weaknesses, and planning assumptions. A staff member from central administration summarized the PAC matching process as follows:

> What you try to do in that [matching] process is try to understand the institution in relation to the environment so that the institution is not constantly putting itself in a position where it is responding to the environment, totally. What you want to do is figure out who you are and how you (the institution) in turn responds to the environment....

As the matching process is completed, the PAC then proposes recommendations and changes to be made to the university-wide strategic plan. These recommendations and changes are

Figure 1

Integration of Environmental Scanning Information at University A


Environmental Analysis Committee
Prepares Report defining:
- Threats
- Opportunities
- Trends
Planning Advisory Committee prepares draft of Five-Year "University-wide Strategic Directions"
Environmental Analysis Information matched with:
- Institutional Strengths
- Institutional Weaknesses
- Planning Assumptions (Mission, State laws, etc.)
President (assisted by staff) prepares final draft of "University-wide Strategic Directions"
- Consults with University constituent groups before final draft prepared
Deans and Dept. Heads use institutional "Strategic Directions" to develop Unit Plans
- Informal/passive Environmental Scanning
- Unit Plans
- Unit Programs
President and his staff review Unit Plans
- Matched with "University-wide Strategic Directions"
Unit Plans linked to Budget

presented to the President as "University-Wide Strategic Directions." The "University-Wide Strategic Directions" are a series of broadly stated five-year goals and two-year objectives. Strategic emphasis is placed on nine university functions: instruction, research, service, students, information resources, faculty and staff, financial resources, physical resources, and institutional advancement. Below is an example of how demographic information obtained through the environmental analysis was combined with institutional strengths to formulate a strategic direction for student services:

GOAL: Improve student services for a diverse student population.

1. OBJECTIVE: Improve services to support nontraditional students and health sciences students.

2. OBJECTIVE: Improve safety and security on all campuses.

3. OBJECTIVE: Increase the availability of child care services.

The next step in the strategic planning process is for Deans, Vice Presidents, and the Provost to develop unit plans. Units within the University are strongly encouraged by the President to tie their plans with the University-wide Strategic Directions. This may be accomplished by setting up a unit strategic planning process that parallels the University's process. Unit administrators commented that the environmental scanning processes at the unit level are more informal and focus on trends that affect specific academic or administrative program areas. One academic administrator commented that there is a general understanding at this institution that "whatever goes on at this university requires that it fit into the strategic planning model." He elaborated further:

> There's a very strong focus. You know where the resources are going to be spent, you know that you are spinning your wheels if you try to go against the plan--you're wasting everybody's time and effort, you know you are not going anywhere.

Once the strategic directions and unit plans are approved by the President in consultation with various University constituent groups, then the planning and budget office links the strategic plan and unit plans to the University's budget. A staff member from central administration quipped:

> The President said establish direction, say what it is you are going to do and then go try to get the resources. If you can't get the resources, then revise the plan. But you always have to have that sense of where you are going, first. Planning has got to lead budgeting. He's said that one thousand times.

The perceived effectiveness of the environmental analysis was tied closely to the respondents perception of University A's total strategic planning process. Several individuals indicated that the value of the environmental analysis is in the quality it adds to information used for

planning and decision making. One academic administrator and faculty member described the use of the environmental analysis as "basing wish-lists on reality." Respondents also perceived value in the process of the environmental analysis. A interviewee from central administration responded that the institution's environmental analysis process tested the validity of scanning information by (1) using competent people to do the scan; and, (2) subjecting the results of the scan to second opinion by the executive cabinet. Even a faculty member who was critical of the institution's overall strategic planning process expressed positive support for the environmental analysis. He said it was the only element of strategic planning that had any usefulness for higher education institutions.

Several individuals interviewed at the unit level found information from the environmental analysis lacking. One respondent said the environmental analysis "wasn't comprehensive enough" and did not provide enough information on the technological environment. Another unit level administrator criticized the environmental analysis as "superficial" and "window dressing" because the committee addressed only obvious issues that faced the University:

> The focus in the environmental analysis was either on the obvious economic, demographic factors, that are applicable to any organization, but failed to take into account the unique mission of an urban university....They did not build a vision of what the University was going to be like in the year 2000 other than extrapolating the past. I think the environment is changing so rapidly that you cannot use the past as a model....

Many respondents chose to comment on the total strategic planning process. There was considerable agreement among those interviewed that strategic planning provided an institutional focus for units within the University. One chief administrator head described the strategic plan as a "living, breathing document" for his area of responsibility. There was also considerable evidence that faculty at the University did not totally accept the strategic planning process. An academic administrator explained it as follows:

> There are lots of faculty at this University that still don't believe in strategic planning or any other kind of planning. With the exception of that group of people...everybody accepts the need for planning and the fact that strategic planning has been beneficial to the University....Compared to other universities it is a good plan--you may not agree where you are going, but it tells you where you are going, and you know if you are going to be here you know you are going to go that way. There's a very strong focus. You know where the resources are going to be spent.

One faculty member elaborated on the misapplication strategic planning to an institution of higher education in general. He said that the "corporate metaphor" is inappropriately applied when

colleges and universities use strategic planning. He added that corporate goals are market-driven, profit motivated, and opportunistic. Colleges and universities have goals that are higher and less definable. One academic dean believed that individual faculty members did not feel ownership in the plan because the decision making authority in the planning process was top-down. He added, however, that the collegial governance structure in a university did not lend itself to a bottom-up planning process, either.

Perhaps the richest description of the faculty role in planning was described by an administrator in central administration. He recounted the trauma experienced by everyone as University A went through the first round of strategic planning and encountered governance issues:

> Respondent: There was certainly a lot of trauma when we began to match up strengths and weaknesses and environmental threats and opportunities because it began to fall out that certain units were going to get priority over others--and that was really traumatic. The whole clarification of the decision-making process was traumatic....There is an awfully lot of care and feeding of the faculty and the units that has to go into this whole thing. If you don't take cognizance of the need to do those things, the process can become interminable and ultimately, I think, it will fail....It is not easy in an academic institution because of the firmly held belief of collegiality and the whole debate over who should make decisions....We judged that in our institution we couldn't accept the bottom-up process because there would be too much anarchy. The unit faculties were often in disarray or disagreement within the unit and then there was a lot of contentiousness among the units. You again have to know the history and culture of your institution.

UNIVERSITY B

University B is one ten public universities in this midwestern state. The University is governed by a Board of Governors. In addition, University B assumes responsibilities delegated to it by the State Legislature and State Board of Higher Education. The mission of University B has a regional focus as it must meet the higher education needs of citizens within its geographical sector of the state. However, students attending University B come from all regions of the state as well as from other states and several foreign countries. The 1987 fall enrollment for University B surpassed 12,000 students and its operating budget approached 50 million dollars. Bachelor and masters degree programs are offered through six colleges-- Applied Sciences, Arts and Sciences, Business, Education, Fine Arts, and Health, Physical Education, and Recreation. The University also has a long history of sponsoring a variety of extension programs to citizens of its region through the School of Continuing Education.

The current environmental scanning and strategic planning processes of University B were brought about through a two interesting circumstances. The first factor was wide recognition among those interviewed that the University suffered a severe enrollment declined during the late 1970s and early 1980s. One faculty member noted:

> I think the current efforts at planning are primarily a result of the downturn of enrollment which made it ever so important that we do careful planning, projecting for increased recruitment of students. And although planning has been a function on this campus for several decades...especially since the downturn in enrollment, planning efforts have increased.

Secondly, dissatisfaction with earlier institutional planning efforts was cited by respondents as another important reason for the new institutional environmental scanning and planning processes. The failures of previous planning processes were well documented by those interviewed at University B. For example, specific references were made to a 1960s planning document entitled "The Decade Ahead." This particular planning document incorrectly projected future enrollments for University B by overestimating as much as 10,000-15,000 students per year. One respondent said that "the projections in there were just straight line projections using historical data and projecting straight out." Authors of the 1960s document failed to make use of demographic data, high school graduates, and other processes that are used by in the institution's current environmental scanning process.

Another perceived problem was the low priority planning was assigned as an administrative function. Under the previous President, respondents indicated that planning was "only a word" not a true long-term thinking process. Several persons described the former planning efforts as "crisis-management" and "reactive." One respondent closely involved in the previous planning process said that if the Higher Education Board requested a three- to five-year plan, then University B would provide a plan with a time horizon of a single year and not even link the budget to the planning items.

A final problem associated with the previous planning process was the poor use of information in planning. According to several of those interviewed, the Budget Director and the Director of Institutional Research never sat in on staff meetings with the President and Vice Presidents. As a result, the following scenario would occur:

Gray heads were sitting around the table, but nobody knew where the ship was

> going in terms of facility, prioritization (sic) of resources, and what is out there we should be watching for....We would make a decision and then somebody would talk to the budget man or institutional research person and the next thing you know we find ourselves in the next meeting without the money to do it. If the budget guy had been sitting in there the week before you would have known and not recycle everything....Months and months were spent planning and never went anywhere...Plan Two looked like Plan One because nothing got done in Plan One.

In 1987, a new president took office at University B. This person previously served as one of the University's Vice Presidents. As the new President, a high priority on his agenda was to elevate the value and quality of planning as a continuous administrative function. This was accomplished with two important organizational changes. First, the new President empowered the Director of Institutional Research and Director of Budgeting with the authority to sit as part of the President's Executive Council. He invited the Directors of these two offices to join him and the four Vice Presidents as "fully participating partners" in the University's decision making process. There was some hesitancy on the behalf of some of the Vice Presidents to include the Director of Institutional Research and the Budget Director as part of the Executive Council. But the President countered, "one of these guys knows where 60 million dollars is and the other guy has all the data."

The Director of Institutional Research and Planning was given the specific responsibility to help the new President "point this ship in the right direction." The President wanted to use the "best data and information available at the time" to direct the future of University B. He informed the Director of Institutional Research and Planning to build a group that "touches the lives of the university family" and accesses anybody on this campus, anybody in the state, and anybody in the nation. The President said, "You are our scanner--talk to anybody--go get them. You have carte blanche."

The second organizational reform was to broaden the scope and to increase the effectiveness of the University's Council on Planning. As a result, the Council on Planning was renamed the Council on Planning Strategies. According to interviews and documentation obtained at University B, the Council on Planning Strategies is a group of individuals representing each Vice Presidential area, the Deans, the faculty, civil service employees, the alumni, and the administrative staff. The Director of Institutional Research and Planning chairs the Council. The Council's primary focus is to provide the President's Executive Council with information on planning. The specific charge to the Council is: (1) to identify issues and trends critical to the strategic and organizational

planning processes of the University; (2) to provide input to decision makers from environmental scanning and monitoring of emerging trends and issues; and, (3) to review budgets before final submission to the President. Members sitting on the Council on Planning Strategies are encouraged to brainstorm emerging issues and trends that are of concern to them. Issues and trends are identified and ranked according to their probable impact upon the University. After these issues and trends are identified, they are thoroughly researched and studied by Council on Planning Strategies members. The outcome of this planning process is a list of priority statements which serve as strategic challenges for the President and his Executive Council to review and consider.

The primary differences between the previous Council on Planning and the current Council on Planning Strategies are twofold. First, the new Council uses information from environmental scanning to develop planning strategies. Second, the new Council has become an arm of the executive staff. Replied one administrator:

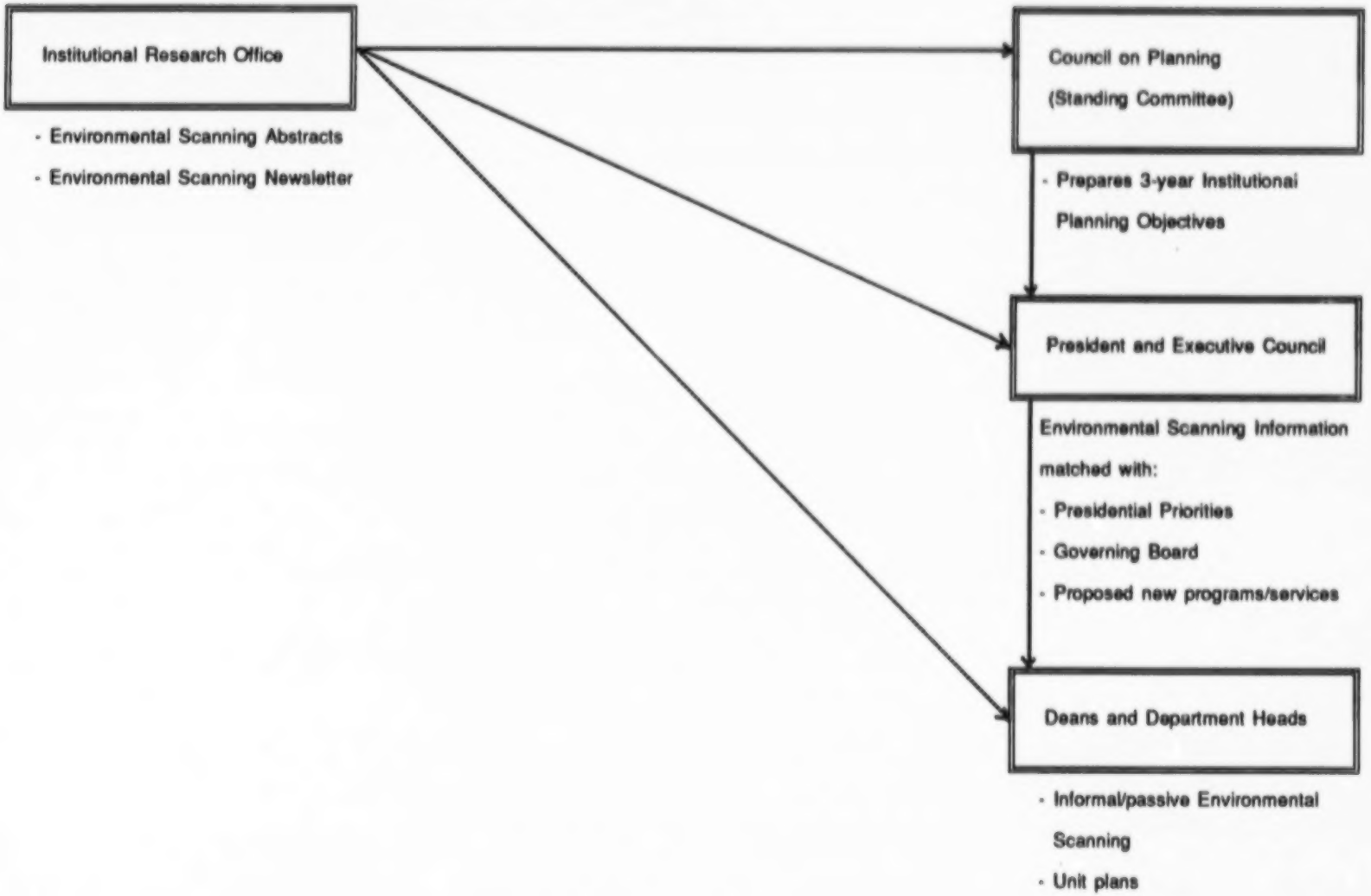
> What is also different is that the people on the new Council are also the decision-makers who can implement the strategies and that is the key. It is one thing to have a group of people who know the right things to do, but if they are powerless to do it....So you have those individuals who can implement them buying in at a much earlier stage and that is critical because they take ownership much earlier.

The environmental scanning process at University B assists in supporting the planning and decision making (see Figure 2). Most respondents described the environmental scanning process as a formal, systematic, and continuous process for collecting data from the institution's external environment. The environmental scanning process is administratively housed in the Office Institutional Research and Planning under the direction of the Director. The Director has no special budget for this function and must use existing staff and resources to carry out the scanning.

Institutional Research staff and interested Council members scan the literature and look for issues and trends in specific areas of concern to the institution--academics, resources, students, and technology. The Director may also assign specific articles for IR staff members to abstract if he believes the article has particular relevance to an issue the executive staff is considering. It is the responsibility of each staff member and Council member to keep informed of issues and trends that affect University B. As the Director of Institutional Research noted, "I think it takes a compulsive person to do this (laughs). You have to be able to focus on the trends that you want to look at and you have to be compulsive in doing this. Not everyone is made that way."

Figure 2

Integration of Environmental Scanning Information at University B



Scanners used primary (original) and secondary sources to obtain environmental scanning information. Data from the U.S. Census, the American Council on Education Fact Book, the Western Interstate Commission for Higher Education, and the State Board of Higher Education served as original sources for demographic information. Journal articles from Change, The Chronicle of Higher Education, and Higher Education and National Affairs were frequently cited as secondary sources of information for other issues and trends.

The task environment of University B is scanned most frequently. Special attention is given to regional, state, and national trends in higher education. On occasion, trends and issues in the general societal environment were formally scanned by persons in the Institutional Research Office. Almost every person interviewed at University B cited the demographic environment as the most important sector of concern. Several reasons were given for using demographic data in the environmental scanning process. First, demographic data are "the firmest". In the words of one respondent, "...there is a certain precision that makes it appealing. We know seventeen years from now how many eighteen year-olds there will be within a narrow range." Another reason why demographic data were deemed important is their affect upon future funding levels of the University. "There is a high correlation between enrollment and funding support," stated an academic administrator. Finally, demographic trends in the areas of minority students and nontraditional students have strong ramifications on the University's enrollment management program and the University's off campus center for undergraduate education.

Results of the environmental scanning process are put into written form as either an abstract or as an item in the monthly Institutional Research newsletter--Trendlines. The abstracts are one or two paragraph summaries that catch the essence of the article as it applies to University B. An abstract index compiled by the Office of Institutional Research and Planning revealed eighteen broad categories of subjects for which there were abstracts written or stored on computer disk. The subject categories ranged from "adult students" and "assessment" to "technology" and "work force." An abstract example would look something like this:

ABSTRACT

File Name: Facility Planning

"Modular, Feasibility Study Starts with Goals," American School & University, July 1988, p. 56.

In many schools throughout the country, a recent surge in growth, combined with increasingly restricted financial resources has spurred a new look at the use of portable/modular buildings. The possible applications of this concept are many and varied. One application that may be useful for University B is the "core concept". This type of structure is made up of a cafeteria, a library, etc. Temporary, modular classroom wings or portable classrooms are then added as needed, and can be converted to permanent classrooms at a later date.

Implications: The advantages to this modular approach are the reduced initial costs and the very short time from concept to completion. Another advantage is the great flexibility in design. This is an approach which may be useful in the development of the off campus undergraduate center.

FACPLAN1
9/8/88
NAME OF ABSTRACTOR

According to the Director, the Newsletter "highlights trends of possible interest to the institution and is distributed to all administrative offices and academic departments." The most current mailing list contained about 90 names. The Newsletter was frequently cited by respondents as a product distributed by the Institutional Research Office. However, not everyone interviewed associated the monthly Newsletter with the environmental scanning process. One respondent who was familiar with the environmental scanning process described the Newsletter as follows:

> My exposure to it is the newsletter that comes from the IR office which abstracts and summarizes important information that has hit nationally and statewide and sometimes local data is published in it....It is a summary of important things. That is important not only for the information it holds, but for the statement it makes that environmental scanning and planning is not a one-time process. It is completely on-going and that is one thing the institution needs to learn--once the Council finishes an academic year cycle of planning, they are not really done. It is totally on-going and never ends. The newsletter helps with that.

No dominant pattern that emerged from the responses which indicated a common usage of environmental scanning information at University B. Instead, there were several differing viewpoints on how environmental scanning information was integrated in planning and decision making. For example, one vice president stated that environmental scanning information was directly linked to the institution's high priority items. Other respondents, however, indicated that they could not directly attribute institutional planning decisions or academic program decisions to information obtained from

environmental scanning. A faculty member formerly involved in the environmental scanning process was unsure if institutional planning decisions were directly linked to environmental scanning information:

> ...I do not know if I have seen decisions that have come out that have been based on the environmental scanning or not. I do not know if our decision to set up the external university center was based in part upon what we know about losing traditional students--there are a lot of people up there. But I don't know if that came from the actual environmental scanning process or people's natural knowledge....It [the environmental scanning] may have helped.

Perhaps the item which emerged as the most common response among respondents revealed that environmental scanning information affected the planning and decision in more of a conceptual manner. Respondents used terms such as "mindset", "perspective", and "awareness", to describe the effect of environmental scanning information had upon planning and decision making. For example, one academic administrator said that environmental scanning information gives a dose of reality and creates a mindset where "you become conscious of more factors that will affect the institution that are not always made explicit in the decision making process." A department chair described environmental scanning information as "helpful in planning for my program within the department, setting off trends in my own mind that I might suggest to faculty...whereas before I had no input or very little conscious input from the outside."

Finally, an alternative viewpoint which emerged from responses was that environmental scanning information might be used to justify existing University, Presidential, or Governing Board priorities. In other words, issues and trends identified through the environmental scanning process were perceived to be used by decision makers to bolster existing priority programs of University B.

Environmental scanning at University B has both value and weakness as perceived by those who have been involved in institutional planning efforts. The value of environmental scanning was described in two ways--value of the process and value of the data/information. The value of environmental scanning as a process has positively influenced planning according to some of those interviewed. Several persons said that the institution is more proactive and in tune with what is happening outside of University B. Those who were interviewed also found value in the quality and quantity of data and information provided through environmental scanning. Several times during the course of interviews, respondents mentioned the "good data" provided by the Director of Institutional

Research and Planning or the "quality information" found in the newsletter.

Not all respondents expressed full faith in the data obtained through the institution's environmental scanning process. One Dean said a weakness in the institution's environmental scanning process was that the data could be tainted by a lack of breadth:

> If the IR Director or one of his staff members are on a jag to read a certain type of journal or certain style of writing, you'll pick it up. There is no attempt to make sure you are covering the whole waterfront.

Even the Director of Institutional Research cautioned that information coming out of the environmental scanning process might be part of his agenda and not the institution's agenda:

> There is probably a danger in that, too....As long as I am going in the direction of the President and Vice Presidents, that is fine. But if I get off in my own little crusade, I could see a real problem there.

Some administrators were concerned that environmental scanning process might end up as a fad in the conservative culture of higher education. A chief academic administrator described environmental scanning as a neutral tool to assist decision makers with planning. However, he contended that maybe institutions of higher education have "jumped" to soon:

> The one thing that struck me in this whole process and so much in higher education is that we have become so reflexive--there is a new technology that is going to change everything....The world changes but there is more of a danger of overreacting than under-reacting. Higher education has to a certain extent jumped. Using the scanning and planning might cause them to forget what got them to the dance and that still has to be done well.

A final weakness perceived by some respondents was the failure to link institutional resources with institutional priority programs. As a result, some faculty and administrators expressed frustration concerning the environmental scanning process. As one Dean contended:

> The resources on campus are the same resources that were here before....We are using environmental scanning if not the formal technique, at least the information--we know what is out there. But we don't have the guts enough to try to change the system to react to that. So consequently, we have these nice charts and overheads and visuals and all of that, we sit in meetings to talk about what we ought to be doing, but we don't take that next step and say alright, we have got four faculty retirements, those four positions go to the external university center....I think that is a break down. Institutions that are doing environmental scanning and are successful in reacting and making that next step...linking plans to budgets and resources.

COLLEGE C

College C is an open door, comprehensive two-year college located in the southern United States. Like many community and junior colleges, College C began operations during the 1960s.

The College serves a rural district of eleven communities with a combined population of approximately 60,000. The institution is governed by a local Board of Regents and receives more than 70 percent of its revenues from state and local funds. The 1988 operating budget was over eight million dollars. The mission of College C is to provide post-secondary education programs in three broad areas--Academic programs (transfer courses), Occupational-Technical programs (career courses), and Continuing and Adult Education programs. College C also provides training programs for local businesses and industries. The College has a close working relationship with a national chemical company that operates a large production plant within the College's service area. College C offers degrees in Associate of Arts, Associate of Science, Associate of Applied Sciences, and Associate of Elective Studies. In the fall of 1987, College C enrolled over 3,600 students most of whom lived in the eleven surrounding communities.

There was little evidence that College C had undertaken a formal, institutional planning process before 1986. One long-term Dean referred to an early, institution-wide master plan, but later added that the master plan had little significance since it only occupied space on his book shelf. Another respondent talked about a previous facility plan for the institution, but did not mention any other type of formal institutional planning process. As a result, there was consensus among those interviewed that whatever institutional planning which took place at College C before 1986, it was informal and lacked a college-wide focus.

The lack of a formal, college-wide planning process at College C did not prevent academic and administrative departments from unit-level planning. Respondents frequently mentioned department efforts to plan for academic programs or for administrative programs. Respondents also cited the use of external information in academic program planning and facility planning. One respondent said that the use of external information in unit planning efforts had been going on "since the inception of the college." Respondents echoed this viewpoint as they commented on the importance of staying abreast of local business, industry, and community needs.

College C began its formal strategic planning process in the fall of 1986. The current President called the decision to undertake strategic planning "the single most important event in the institution's twenty year history." The College's formal planning document cited several factors which influenced a formal approach to institutional planning. First, the state and local economy was hit

particularly hard during the 1980s when petroleum prices fell. An economic recession hit the state and financial support to public institutions of higher education severely declined. In 1986 alone, community colleges suffered a 16 percent reduction in state appropriations.

Another factor which affected the College's decision to undertake a strategic planning process was a state-wide movement to improve the quality of higher education. A special statewide task force composed of prominent citizens was formed to study public higher education. As part of the special task force's study, community college presidents were questioned about performance standards of their students. The community college presidents expressed difficulty answering some of the special task force questions concerning student tracking issues, student transfer rates to senior institutions, and student success in remedial programs. As a result, the current President of College C saw the need to "get our house in order...or other folks [the legislature] will do it for us."

The most pervasive reason for adopting a formal planning strategy was the new accrediting criteria required by the Southern Association of Colleges and Schools (SACS). According to the SACS Resource Manual on Institutional Effectiveness, colleges and universities must be able to demonstrate gains in measuring the educational outcomes of their students. Therefore, colleges and universities must implement a formal planning process which provide goals and objectives for specific levels of student attainment. The SACS Manual on Institutional Effectiveness specifically recommends that colleges and universities undertake some form of strategic planning to clarify their roles in an ever-changing and complex environment.

The College employed an outside consultant to assist in the development of a formal strategic planning process. College administrators agreed with the consultant's recommendation that the institutional planning process should work within the College's existing decision-making structure. As a result, the structure of the institution's new planning process was organized around a committees. The first committee formed as part of the strategic planning process was to evaluate the College Mission. The committee consisted of Board members, faculty, students, and members of the community.

After evaluating the College's Mission Statement, the consultant recommended the formation of a special, ad hoc Steering Committee for Long-Range Planning. Members of the Steering Committee included broad representation from the College's full-time employees. A group of twenty-

four full-time College employees including administrators, faculty, and staff were appointed by the President to work together on a variety of committee tasks. The Steering Committee was empowered to gather information in order to develop general goals for the College. Once the goals were developed, they would be subject to approval from the Board of Regents.

The Steering Committee was divided into three subcommittees. Each subcommittee was assigned a specific task to support the work of the Steering Committee. The subcommittee assignments included: a Subcommittee to Study Goals(Values), a Subcommittee to Study Strengths and Weaknesses, a Subcommittee to Study the Environment. Members of the subcommittees were also members of the Steering Committee.

The ad hoc Subcommittee to Study the External Environment consisted of nine committee members who were administrators, faculty, and staff of the College. Service on the external environment Subcommittee was an ad hoc appointment with the task of identifying threats, opportunities that might affect the College during a five-year time horizon. The Steering Committee provided the environmental Subcommittee with a list of forty-five "major forces" affecting the College. Some of these major forces included issues and trends in areas such as the decline in state revenues, the impact of technological change on academic programs, the availability of student financial aid, and the demands for academic quality. Subcommittee members were then asked to analyze these forces and produce a report to the Steering Committee within six weeks.

Members of the Subcommittee found it difficult to study only factors in the College's external environment. As a result, the Subcommittee enlarged its focus to include "selected conditions and trends which might affect the overall planning process." The external environment Subcommittee divided the forty-five major forces affecting the College into ten areas: economic and social factors, political/legal factors, technological factors, competitive factors, clientele, demographic factors, financial aid, personnel, performance measures, and graduates. Individual Subcommittee members were assigned specific areas to study. Committee members studied factors which existed primarily in the College's task environment. For example, emphasis was place on scanning environmental sectors closely related to College's service area such as local high school graduation rates, job listings from local communities, demographic characteristics of College C's students. A variety of sources was used to study the issues and trends. Primary (original) sources included state

economic and demographic information, surveys and interviews conducted by college personnel, and student data compiled by the College. Use of secondary information sources was not found in College documents, although the Chronicle of Higher Education was mentioned during the interviews as a source for scanning. Once the individual Subcommittee members finished their individual reports, the entire Subcommittee convened to discuss the results.

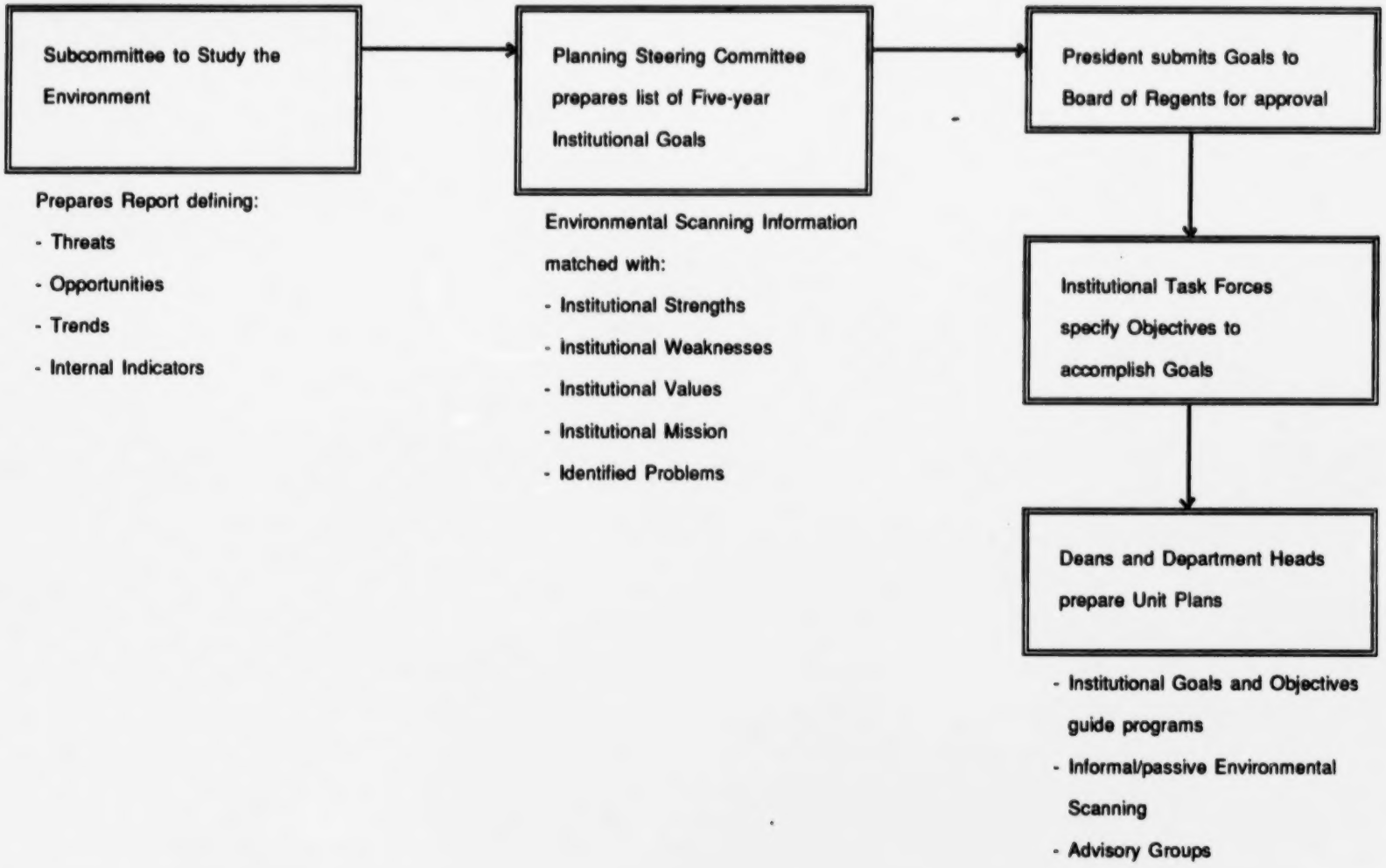
The environmental Subcommittee's final product consisted of concise summaries (two to five pages) and various graphs and charts which described forces affecting the College and how those factors might also affect institutional planning. The Subcommittee's summaries were presented to the Steering Committee for approval four months after the Subcommittee's first meeting. The summaries were given to the Steering Committee and were compiled in a lengthy document entitled Planning Information Document.

Once the Steering Committee received reports from the Subcommittee to Study the External Environment, the Subcommittee on Goals(Values), and the Subcommittee to Study Strengths and Weaknesses, the next task in the planning process was to formulate institutional goals (See Figure 3). Members of the Steering Committee were responsible for developing the first draft of institutional goals. Institutional goals were developed from information provided by the environmental subcommittee, the strengths and weaknesses subcommittee, the goals(values) subcommittee, and information about mission, comparative advantage, clientele, and program/administrative areas. The first listing consisted of forty-nine institutional goal statements. A modified Delphi technique was employed to rank the goals. Steering Committee members were then asked to rate each goal according to a 1 to 10 scale. A rating of one would mean the goal was of "no importance" while a rating of ten would indicate the goal would be of "great importance."

The Chair of the Steering Committee reported that information from the environmental Subcommittee was especially helpful during the final round of consolidating and ranking goals. He mentioned two goals that previously had not been highly ranked emerged in a higher position as a result of the environmental information. One of the previously low-ranked goals was the new accreditation criteria and the other low-ranked goal was increased efforts to recruit minority students. The Steering Committee Chair remarked that without the external environmental information pertaining to these issues, these two goals may have been overlooked by the Steering Committee.

Figure 3

Integration of Environmental Scanning Information at College C


Subcommittee to Study the Environment
Prepares Report defining:
- Threats
- Opportunities
- Trends
- Internal Indicators
Planning Steering Committee prepares list of Five-year Institutional Goals
Environmental Scanning Information matched with:
- Institutional Strengths
- Institutional Weaknesses
- Institutional Values
- Institutional Mission
- Identified Problems
President submits Goals to Board of Regents for approval
Institutional Task Forces specify Objectives to accomplish Goals
Deans and Department Heads prepare Unit Plans
- Institutional Goals and Objectives guide programs
- Informal/passive Environmental Scanning
- Advisory Groups

The final list of nine Long-Range Goals was submitted to the Board of Regents for discussion and approval. The nine Long-Range Goals for College C were:

1. To offer a high quality instructional program which provides students with the necessary skills to continue their education and to enter the workforce.
2. To improve remedial education courses.
3. To work toward developing a more positive image among area high schools and in the community.
4. To continue present efforts to establish collaborative relationships with local business and industry.
5. To provide greater opportunities for professional development for college employees.
6. To meet the guidelines for institutional effectiveness developed by the Southern Association of Colleges and Schools.
7. To consider the renovation of the existing facility or the addition of a new facility to provide expanded areas for service.
8. To seek ways of improving communication throughout the College.
9. To continue efforts to increase minority student enrollment.

Stage Two of the strategic planning process was development of an implementation plan. Ten task forces were created to develop operational objectives for the institution's Long-Range Goals. Task force members were appointed by the President and included faculty and administrative staff. The ten task forces were organized under the following categories: Academic Education, Remedial Education, Learning Assistance Center, Marketing, School/College Linkage, Continuing Education, Business and Industry, Facility, Part-time Teachers, and Minority Enrollment.

Task force members worked over a five month period to develop the institution's implementation plan. Each institutional Long-Range Goal was divided into six implementation steps: (1) an objective statement, (2) an action statement, (3) a progress statement, (4) a responsibility statement, (5) a resource requirement statement, and (6) a time frame statement. The results of the Stage Two task forces culminated into a twenty-nine page implementation plan for the institution to achieve its nine Long-Range Goals. Below is an example taken from the implementation plan:

Goal: To meet the guidelines for institutional effectiveness developed by the Southern Association of Colleges and Schools.

Objective 6:1 Insure that the development of long-range plans is emphasized and to review progress of the planning effort.

Actions to Accomplish Objective 6:1
On-going review of the planning process.

Responsibility: Steering Committee for Long-Range Planning

Requirements: No additional costs anticipated.

Time Frame: Continuously

At the time of the case site visit, the College was embarking on Stage Three of the strategic planning process. Stage Three involved linking the college-wide implementation plan to individual unit plans within the College. It was too early to report any results from this part of College C's planning process. However, an interesting observation was made regarding the on-going use of external information by Deans and administrators at the unit level. Deans and Department Heads at College C reported having always utilized information extracted from the local community. One academic administrator summed it up in this manner:

> We are localized in the sense that most of our students come from this geographical area. We know what the industry is and if we're smart we know what their needs are. If we don't, then [shakes head from side to side.]

Replied another academic administrator:

> Our programs operate or die based on whether you meet the community needs. If you don't provide a program that they want, they (the student) vote for it with their feet. They'll either come if they like it, if they don't like it they'll walk out half-way through the course....If your don't keep abreast of what the community needs, then you are not going to have a program.

This external information has been obtained through formal and informal means. Advisory Committees were frequently mentioned as a formal mechanism for obtaining external information for academic and administrative planning at College C. Advisory Committees are especially helpful for developing academic programs in the occupational-technical area of the College. According to the College mission statement, Advisory Committees are used "to advise on program content, equipment, and employment opportunities." One academic administrator described the Advisory Committee function in this way:

> We have an Advisory Committee for each of our thirty program areas. It's typically made up of five-plus members. Each member is a person outside the institution.

> They're employed in the field which they're representing. We try to get people that we know are either front-line supervisors or possibly even people that actually have hands-on experience in that because therefore, we can determine or find out exactly what's going on in the field.
>
> We meet with that group and we review curriculum proposals, we gather job opportunities, what direction is that career or that occupation going as far as technological advances, are there changes, do we need to look at as far as the future. We try to look down the road....We do not make any change in a program that we do not review with them.

Respondents also mentioned the use of informal mechanisms as a means for obtaining external information for academic and administrative planning. Phone calls to local school districts, letters to local industries, and luncheons with community leaders were cited as informal ways external information is gathered for academic and administrative planning. For example, one administrator describe an informal process of obtaining minority drop-out rates from local high schools in this manner:

> We are a relatively small area with a population about 60,000...it is really just a matter of picking up the phone and calling somebody at the school district and getting the information from them. Now that's probably a more efficient method than sending out a formalized document to your service area high schools or driving up the road to a high school and sitting down with the superintendent of schools and talking to them about minority student enrollment.

The College's Vice President concurred with the interviewer's observation that the process of getting external information into planning and decision making at College C is primarily an informal process:

> As we discussed earlier, when you ask people about environmental scanning, most people are going to look at you and say "What?" Because that term, unless someone has worked in planning, is not something that most of us would be familiar with. Now scanning goes on in just about every office here at the College, perhaps not in the formal sense. Perhaps a student passing by saying "you know it sure would be good if..." and that becomes something you file away. And when you get another hit on that you say "well, maybe we need to look at that." A study may begin, or it maybe more ad hoc than sitting down and saying "Let's all sit down and scan the environment."

Comments regarding the effectiveness of the formal environmental scanning process upon planning and decision making at College C were generally favorable. However, most respondents felt it was too early to assess the substantive outcomes of formal environmental scanning on the College's planning process. Many of those interviewed said that the new planning process seemed more "formalized" and helped bring data for planning into an institutional focus. Some of those interviewed felt that the data for planning was better than previous information used for unit

planning. There were relatively few negative comments regarding the effects of formal environmental scanning information upon planning and decision making because of two reasons: (1) the formal environmental scanning process was new and not well-recognized at College C; and, (2) the responses from those interviewed indicated more reliance upon the Advisory Committees for external information than from the formal environmental scanning process.

DISCUSSION

The preliminary results indicate that there are some common patterns in how these environmental scanning efforts were developed among the sample of institutions (see Table 1). New presidential leadership and active governing board influence were two critical factors in the introduction of strategic planning and environmental scanning at two of the case sites. Also influential were environmental influences such as reductions in state appropriations and enrollment declines experienced by all three institutions. These findings were consistent with results reported by Cope (1987) and Schmidtlein and Milton (1988) who found similar influences upon the implementation of campus planning efforts at colleges and universities. Perhaps most important was that each institution reported a different overriding influence for developing new planning processes: (1) the dissatisfaction with previous, internally oriented planning efforts at University A; (2) the downturn in student enrollments and subsequent budget cuts at University B; and, (3) the newly required accrediting standards at College C.

Another preliminary finding of this study suggested that there was no single "best way" to organize a formal environmental scanning process (see Table 2). Decision makers at each institution took into consideration the unique, contextual characteristics of their organizations in designing the formal environmental scanning process. Presidential recognition and support for the formal environmental scanning process was perceived as essential at each institution. Chief executive support has also been found to be closely tied to the organizational stability of environmental scanning units in the corporate sector (Stubbart, 1982). Presidential support at the case sites was demonstrated through the presidents' personal recognition that the formal environmental scanning process was an essential element of the institutional planning process. This was especially true at University B. An organizational change was made by the new president of University B to include the Director of Institutional Research and Planning in Executive Council

Table 1

Development of Strategic Planning and Environmental Scanning at the Case Site

Developmental Influences	Institutions A	B	C
Year began	1983	1986	1987
President's Role	Active Involvement	Active Involvement	Moderate Involvement
Board's Role	Active Involvement	Not Mentioned	Moderate Involvement
Consultant's Role	Active Involvement	None Used	Active Involvement
Former Planning Process	Internally Oriented	Internally Oriented	Externally Oriented Decentralized Unstructured
Other Influences	State Budget Cuts Collegial Governance	State Budget Cuts Enrollment Decline	State Budget Cuts Quality Movement Accrediting Agency

Table 2

Organizational Structure of the Environmental Scanning Process

Structure	Institutions		
	A	B	C
Scanning Entity	Ad Hoc Environmental Analysis Committee	Institutional Research Office	Ad Hoc SubCommittee to Study the Environment
Scanners	Appointed by President Experts Community Representatives	Institutional Research Staff	Appointed by President Representative of College Work Force
Administrative Office	Coordinated by Planning and Budget	Directed by Institutional Research and Planning	Coordinated by College Vice-President
Special Budget	None	None	None

meetings. Interestingly, the extent of presidential support did not go so far as to allocate specific funds for the environmental scanning function at any of the institutions. Participation in the formal environmental scanning process was considered an "extra" responsibility carried out by faculty/staff, community leaders, or existing institutional research staff.

One of the most surprising results found at all three case sites was that more emphasis was placed on scanning the task environment (local community, local/regional businesses, local/state demographics, student characteristics) than the general societal environment (see Table 3). This was reflected through the interviews as well as in the environmental scanning documentation at each institution. This finding is contradictory to recommendations made by some environmental scanning advocates who stress that general societal trends and events should be regularly scanned to detect "weak signals" (Daft, 1988; Morrison and Mecca, 1988). Another interesting finding was that College C place importance on scanning factors in the institution's internal environment as well as the task environment. One reason for scanning internal as well as external sectors of College C was to gather information and to develop indicators necessary for the new accrediting standards.

The integration of environmental scanning information into institutional planning and decision making was uniquely conducted at each case site. At University A, the President reserved final authority for all institutional planning and budgeting decisions. He used information from the Environmental Analysis Committee and the Planning Advisory Committee to help formulate strategic directions regarding the future of University A. The President then made his planning and budget decisions from "contextual" information such as the University-wide Strategic Directions. This description of information use is similar to what Ewell (1989) has described as information "to set a context for decisions" (p. 11-12). The University-wide Strategic Directions of University A provided a "context" of holistic processes and experiences for the President to use in making his final planning and budgeting decisions for the institution. It should be pointed out, however, that information obtained from University A's formal environmental scanning process was reported as less helpful for some administrators charged with the responsibility of planning at the unit level (college, school, or department). The integration of environmental scanning information into manageable and measurable forms at the operational level has been reported to be a difficult task (Borden and Delaney, 1989; McLaughlin and McLaughlin; Morrison and Mecca, 1989). As a result, some units

Table 3

Formal Environmental Scanning Process

Process	Institutions A	B	C
Cycle	Every 2 years (Periodic)	Daily (Continuous)	As needed (Ad hoc)
Time Horizon	5 years	3-5 years	5 years
Environment	Task Some General	Task Some General	Task
Environmental Sectors	Supplies/Suppliers Economics/Financial Technological Demographics/Social Trends Research Funding Political/Legal Higher Education Business	Administration Adult Students Assessment Demographics Daycare Disabled Students Enrollment Faculty Financial Aid Marketing Recruitment Retention Minority Retirement Technology Tuition Undergraduate Education Women Work Force Graduates	Economic/Social Political/Legal Technological Competitive Clientele Demographic Financial Aid Personnel Performance Measures Graduates
Sources Used	Original Govt. Reports Surveys Secondary Local Newspaper News Periodicals Professional Journals	Original Govt. Reports Fact Books Regional Board Reports Secondary Professional Journals National Newsletters	Original Govt. Reports Business Reports Surveys Secondary Professional Journals
Products	Environmental Analysis Document Threats and Opportunities	Abstracts Newsletter with Institutional Implications	Chapter in Planning Document Threats and Opportunities

within University A supplemented the institution's formal environmental scanning process with more specific information obtained by unit level environmental scanning processes. These unit level scanning processes were described as less formal than the institution's process and involved more passive forms of scanning such as attending conferences or reading professional journals.

Integration of environmental scanning information into the institutional planning and decision making processes at University B was less structured than at University A. Some respondents believed that environmental scanning information was used to make rational planning decisions. According to the rational model, decision makers seek information in order to reduce uncertainty and to clarify the probable consequences that have the greatest benefit and the least cost (Ewell, 1988). Others described environmental scanning information as being used to promote or legitimize Presidential or Board priorities. Ewell (1988) writes that "this use reflects the contention that mobilizing support, not decision making itself, is the premier management activity..." (p. 13). Environmental scanning information at University B was also reportedly used similarly as in University A--to set a "context" for decisions. The President at University B said that environmental scanning information helps him set a strategic vision for the University. This vision is expressed in the three-year planning objectives of University B. Finally, administrators at the operational level of University B expressed satisfaction with information provided in the environmental scanning Newsletter. However, Deans and Department Heads relied more on their own informal scanning methods to obtain information for unit level planning.

The development of a formal environmental scanning process as well as the establishment of a formal college-wide planning process at College C were primarily in response to the new "institutional effectiveness" accrediting criteria required by the Southern Association of Colleges and Schools. As was previously noted, College C had historically used Advisory Committees to obtain information from the College's task environment for academic and facility planning. However, this was the first time that the College had used information from a formal, college-wide environmental scanning process for institutional planning. The information gathered in its formal environmental scanning process was used to identify problems the institution might address in a five-year time horizon. The primary use of information from College C's formal environmental scanning process was to develop institutional goals. However, the College also used environmental information from

its formal scanning process to establish baseline data to measure student outcomes as well as to identify the future training needs of businesses and industries in the local service area. Interviews with administrators at the unit level indicated less reliance on the formal environmental scanning process and more dependence upon existing sources of external information such as the Advisory Committees and informal contacts with organizations in the service area.

Preliminary findings from all three case sites indicated that the perceived effectiveness of environmental scanning process on planning and decision making had both benefits and limitations (see Table 4). These findings were similar to those obtained by Morrison and Mecca (1989) in their case study of an environmental analysis/strategic planning process at a two-year college. Perceived benefits of using environmental scanning information in planning and decision making activities were: (1) increased awareness of external influences; (2) more focus on institutional strategies and goals; (3) realistic and "better" data for planning. Limitations of using environmental scanning information in planning and decision making were: (1) data quality lacking for operational (unit) planning; (2) environmental domains defined too narrowly; (3) limited faculty participation.

CONCLUSION

The purpose of this study was to shed some light upon various aspects of exemplary, formal environmental scanning efforts in three different institutions of higher education. The results indicated that support from the chief executive officer was a necessary, but not sufficient step in establishing a credible, formal environmental scanning process. Other contextual factors such as governing board influence, institutional decision making authority, and academic culture played an integral part in the successful development of formal environmental scanning processes.

The findings also revealed that decision makers were looking for effective ways to reduce environmental uncertainty and to incorporate information primarily from the task environment into campus planning efforts. Contextual factors such as governance structures, faculty/staff participation, and resource allocation influenced the use and acceptance of environmental scanning information at the case sites.

Table 4

Perceived Effectiveness of Environmental Scanning on Planning and Decision Making

Dimension	Institutions A	B	C
Benefits			
Data Quality	Realistic data Informative data	Realistic data Informative data	Objective indicators Informative data
Resource Allocation	Budget linked to plan	---	---
Planning and Decision Making	More formalized	More efficient	More formalized
Institutional Culture	More proactive More institutional focus	More proactive	More institutional focus
Limitations			
Data Quality	Not comprehensive enough Lacked vision Superficial	Bias of Institutional Research Office	Too early to assess
Resource Allocation	Programs not prioritized	No new resources to promote innovation	Too early to assess
Planning and Decision Making	Faculty involvement limited	Faculty involvement limited	Too early to assess
Institutional Culture	Scanning Process violates tradition of collegial governance	Institution overreacts	Too early to assess

Preliminary results from the case sites indicated that environmental scanning information was used for several types of planning and decision making functions. Some of these included strategy formulation, problem identification, decision selling, goal setting, and objective setting. Ewell (1989) writes that "the idea that information is valuable for decision making constitutes a core value of institutional research" (p. 1). Institutional researchers who direct or coordinate formal environmental scanning efforts should be aware that information they provide may have a variety of institutional uses.

Finally, information from the formal environmental scanning process was frequently reported as less useful for unit planning and decision making. The issue of closing the gap between "strategic" information at the institutional level and "program" information at the operational level remains a problem even at institutions with exemplary environmental scanning processes. Information for strategic issues requires information which is based upon "values, intuition, and leadership as they do on factual data" (Dunn, 1989, p. 78). Information for operational planning is more detailed, quantitative, and has almost no strategic value (Cope, 1987). Borden and Delaney (1989) write that institutional researchers have the unique opportunity to assume the unique role of "information brokers" in nurturing the links between strategic decision making areas and operational areas.

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